Manchester Environmental Laboratory

7411 Beach Dr E, Port Orchard, Washington 98366

Case Narrative

April 27, 2014

Subject: Butcher's Scrap and Metal

Sample: 1404046-01

Officer: Kevin Hancock

By: M. Mandjikov

PCB Analysis

Analytical Method(s)

The sample was extracted following a modification of EPA Method 3541. The extracts underwent Florisil, sulfur, silica gel, and acid cleanup, modifications of EPA Methods 3620C, 3660B, 3630B and 3665A respectively. The extracts were then analyzed following a modification of EPA Method 8082A.

Holding Times

The sample was received in good condition, within the proper temperature <6° C and was prepared and analyzed within method holding times.

Initial Calibration

The initial calibration (ICAL), initial calibration verification (ICV) and back calculations (BC) were within QC limits.

Continuing Calibration

All continuing calibration verifications (CCVs) were within QC limits.

Method Blanks

No target analytes were detected in the laboratory method blank.

Laboratory Control Samples

The recoveries and relative percent differences (RPD)s of the laboratory control samples were within QC limits.

Surrogates

The surrogates could not be identified due to the high levels of PCB Aroclor interference in the samples. Only the blank and LCS surrogate results were reported.

Duplicate Samples

No duplicate samples were prepared with this project.

Matrix Spikes

The concentrations of PCB Aroclors in the samples exceeded 4 times the amount added to the matrix spikes. Therefore, no recoveries or RPDs were calculated.

Qualitative Identification

The RPDs between analytical columns were within QC limits.

Comments

Some Aroclor results could not be detected due to interference from other Aroclors. In these cases, the result is reported as an estimated reporting limit at the level of the interference as follows.

Aroclor 1016	1404046-01	UJ
Aroclor 1221		
Aroclor 1232		
Aroclor 1248		
Aroclor 1254		

Data Qualifiers

Code	Definition
E	Reported result is an estimate because it exceeds the calibration range.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
NAF	Not analyzed for.
NC	Not calculated.
REJ	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
U	The analyte was not detected at or above the reported sample quantitation limit.
UJ	The analyte was not detected at or above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately measure the analyte in the sample.
bold	The analyte was present in the sample. (Visual aid to locate detected compounds on the analytical reports.)

Washington State Department of Ecology
Manchester Environmental Laboratory
Final Report for
Polychlorinated Biphenyls

Project: Butcher's Scrap and Metal, Inc.

Field ID: Sample 4

Work Order: 1404046
Project Officer: Hancock, Kevin
Initial Vol: 20.653 g
Final Vol: 2.3 mL

Lab ID #: 1404046-01
Collected: 4/9/2014
Prep Method: SW3541
Analysis Method: SW8082
% Solids: 37.51%

Batch ID: B14D087
Prepared: 4/15/2014
Analyzed: 4/26/2014
Matrix: Sediment/Soil
Units: ug/Kg dw

CAS#	Analyte	Result	Qualifier	RL	MDL
12674-11-2	PCB-aroclor-1016	94000	UJ	15000	3400
11104-28-2	PCB-aroclor-1221	5900	UJ	1500	330
11141-16-5	PCB-aroclor-1232	5900	UJ	3000	870
53469-21-9	**PCB-aroclor-1242**	**110000**		7400	950
12672-29-6	PCB-aroclor-1248	170000	UJ	7400	940
11097-69-1	PCB-aroclor-1254	28000	UJ	7400	230
11096-82-5	PCB-aroclor-1260	1500	U	1500	170
37324-23-5	PCB-aroclor-1262	1500	U	1500	64
11100-14-4	PCB-aroclor-1268	1500	U	1500	74

Surrogate Recovery:

CAS#	Analyte	Result	Spike Level	% Rec.	% Rec. Limits
2051-24-3	Decachlorobiphenyl (DCB)		12.9		50-150
877-09-8	Tetrachloro-m-xylene		12.9		30-130

Authorized by: M. Manuljka **Release Date:** 4/28/14

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Final Report for
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Project: Butcher's Scrap and Metal, Inc.

QC Type : Method Blank

Work Order: 1404046
Project Officer: Hancock, Kevin
Initial Vol: 20 g
Final Vol: 1 mL

Lab ID #: B14D087-BLK1
Prep Method: SW3541
Analysis Method: SW8082
Source Field ID: Blank

Batch ID: B14D087
Prepared: 4/15/2014
Analyzed: 4/23/2014
Matrix: Sediment/Soil
Units: ug/Kg dw

CAS#	Analyte	Result	Qualifier	RL	MDL
12674-11-2	PCB-aroclor-1016	5.0	U	5.0	1.1
11104-28-2	PCB-aroclor-1221	2.5	U	2.5	0.55
11141-16-5	PCB-aroclor-1232	5.0	U	5.0	1.5
53469-21-9	PCB-aroclor-1242	2.5	U	2.5	0.32
12672-29-6	PCB-aroclor-1248	2.5	U	2.5	0.32
11097-69-1	PCB-aroclor-1254	2.5	U	2.5	0.076
11096-82-5	PCB-aroclor-1260	2.5	U	2.5	0.28
37324-23-5	PCB-aroclor-1262	2.5	U	2.5	0.11
11100-14-4	PCB-aroclor-1268	2.5	U	2.5	0.12

Surrogate Recovery:

CAS#	Analyte	Result	Spike Level	% Rec.	% Rec. Limits
2051-24-3	**Decachlorobiphenyl (DCB)**	**4.69**	5.00	**94**	50-150
877-09-8	**Tetrachloro-m-xylene**	**3.76**	5.00	**75**	30-130

Authorized by: M. Mandjikov **Release Date:** 4/28/14

Washington State Department of Ecology
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Final Report for
Polychlorinated Biphenyls

Project: Butcher's Scrap and Metal, Inc.

QC Type : LCS

Work Order: 1404046
Project Officer: Hancock, Kevin
Initial Vol: 20 g
Final Vol: 1 mL

Lab ID #: B14D087-BS1
Prep Method: SW3541
Analysis Method: SW8082
Source Field ID: LCS

Batch ID: B14D087
Prepared: 4/15/2014
Analyzed: 4/23/2014
Matrix: Sediment/Soil
Units: ug/Kg dw

Analyte	Result	Spike Level	RL	%Rec	%Rec Limits
PCB-aroclor-1016	**17.9**	25.0	5.0	**71**	50-150
PCB-aroclor-1260	**20.7**	25.0	2.5	**83**	50-150

Surrogate Recovery:

CAS#	Analyte	Result	Spike Level	% Rec.	% Rec. Limits
2051-24-3	Decachlorobiphenyl (DCB)	**4.74**	5.00	**95**	50-150
877-09-8	Tetrachloro-m-xylene	**3.86**	5.00	**77**	30-130

Authorized by: M. Mandjikow

Release Date: 4/28/14

Washington State Department of Ecology
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Final Report for
Polychlorinated Biphenyls

Project: Butcher's Scrap and Metal, Inc.

QC Type : LCS Dup

Work Order: 1404046
Project Officer: Hancock, Kevin
Initial Vol: 20 g
Final Vol: 1 mL

Lab ID #: B14D087-BSD1
Prep Method: SW3541
Analysis Method: SW8082
Source Field ID: LCS Dup

Batch ID: B14D087
Prepared: 4/15/2014
Analyzed: 4/23/2014
Matrix: Sediment/Soil
Units: ug/Kg dw

Analyte	Sample Result	Spike Level	%Rec	RPD	%Rec Limits	RPD Limit
PCB-aroclor-1016	**17.0**	25.0	**68**	5	50-150	40
PCB-aroclor-1260	**20.5**	25.0	**82**	0.9	50-150	40

Surrogate Recovery:

CAS#	Analyte	Result	Spike Level	% Rec.	% Rec. Limits
2051-24-3	Decachlorobiphenyl (DCB)	**4.63**	5.00	**93**	50-150
877-09-8	Tetrachloro-m-xylene	**3.56**	5.00	**71**	30-130

Authorized by: M. Mandlika Release Date: 4/28/14

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Final Report for
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Project: Butcher's Scrap and Metal, Inc.

QC Type : Matrix Spike

Work Order: 1404046
Project Officer: Hancock, Kevin
Initial Vol: 20.153 g
Final Vol: 3 mL

Lab ID #: B14D087-MS1
Prep Method: SW3541
Analysis Method: SW8082
Source Field ID: Matrix Spike
Source Lab ID #: 1404046-01

Batch ID: B14D087
Prepared: 4/15/2014
Analyzed: 4/26/2014
Matrix: Sediment/Soil
Units: ug/Kg dw

Analyte	Result	Spike Level	Source Result	%Rec	%Rec Limits
PCB-aroclor-1016		66.1	0.00	NC	50-150
PCB-aroclor-1260		66.1	0.00	NC	50-150

Surrogate Recovery:

CAS#	Analyte	Result	Spike Level	% Rec.	% Rec. Limits
2051-24-3	Decachlorobiphenyl (DCB)		13.2		50-150
877-09-8	Tetrachloro-m-xylene		13.2		30-130

Authorized by: M. Mandji Kau

Release Date: 4/28/14

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Final Report for
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Project: Butcher's Scrap and Metal, Inc.

QC Type : Matrix Spike Dup

Work Order: 1404046
Project Officer: Hancock, Kevin
Initial Vol: 20.24 g
Final Vol: 2.7 mL

Lab ID #: B14D087-MSD1
Prep Method: SW3541
Analysis Method: SW8082
Source Field ID: Matrix Spike Dup
Source Lab ID #: 1404046-01

Batch ID: B14D087
Prepared: 4/15/2014
Analyzed: 4/26/2014
Matrix: Sediment/Soil
Units: ug/Kg dw

Analyte	Sample Result	Spike Level	Source Result	%Rec	RPD	%Rec Limits	RPD Limit
PCB-aroclor-1016		65.9	0.00	NC	NC	50-150	40
PCB-aroclor-1260		65.9	0.00	NC	NC	50-150	40

Surrogate Recovery:

CAS#	Analyte	Result	Spike Level	% Rec.	% Rec. Limits
2051-24-3	Decachlorobiphenyl (DCB)		13.2		50-150
877-09-8	Tetrachloro-m-xylene		13.2		30-130

Authorized by: M. Mandella Release Date: 4/28/14